

# Milwaukee County COVID-19 Data Summary

Milwaukee County COVID-19 Epidemiology Intel Team

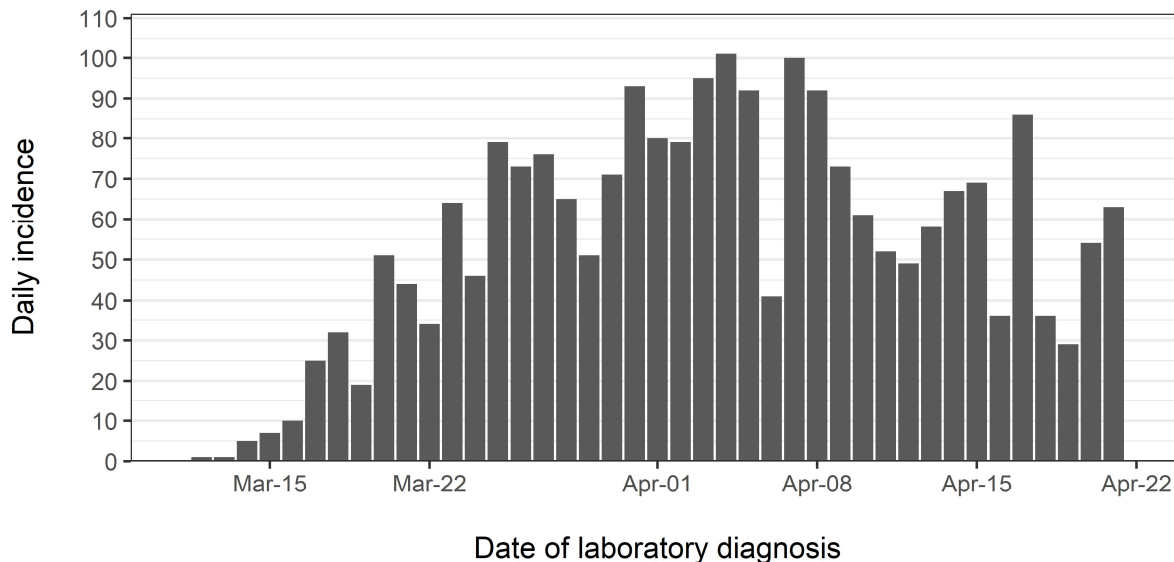
April 23, 2020

This report was updated on April 23, 2020 and includes data through April 21, 2020.

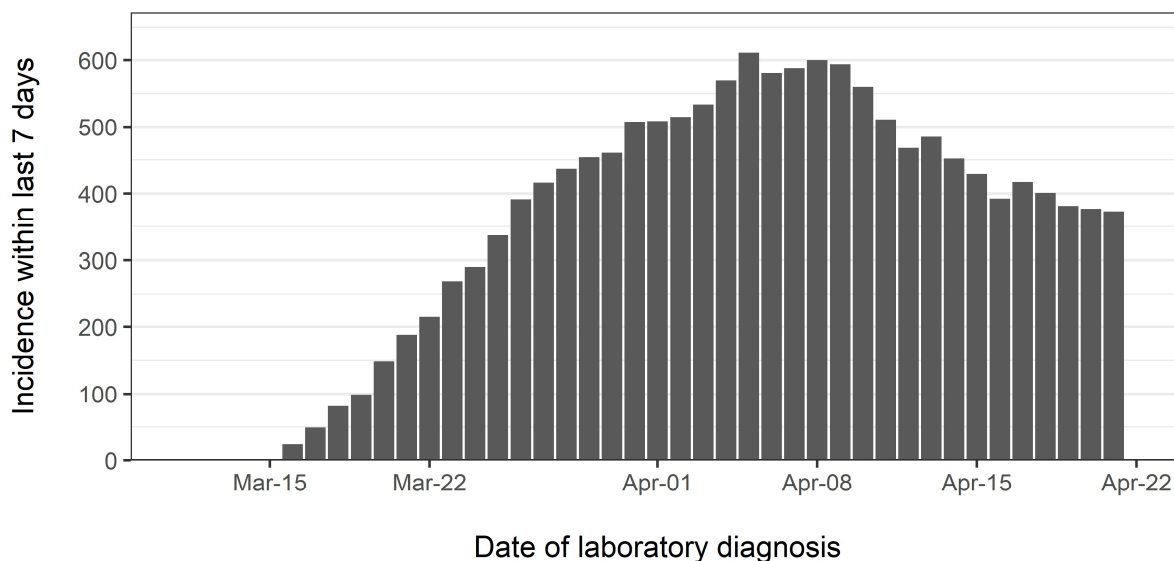
## Total Cases and New Cases

There are now a total of 2260 cases in Milwaukee County, since the first confirmed case on March 12, 2020. Over the last week, we observed 373 new confirmed cases in Milwaukee County. The first plot below shows the daily incidence of new cases. The second plot shows a daily count of the number of cases in the last 7 days, which provides a smoothing effect to enhance visualization.

**Milwaukee County daily number of confirmed COVID-19 cases**

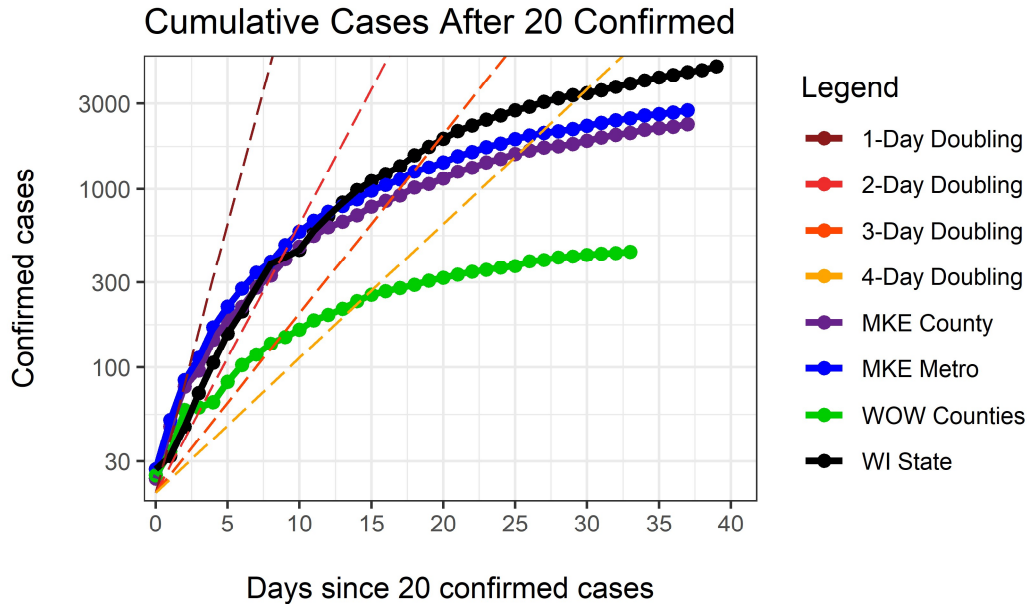


**Milwaukee County confirmed COVID-19 cases within the last 7-days**

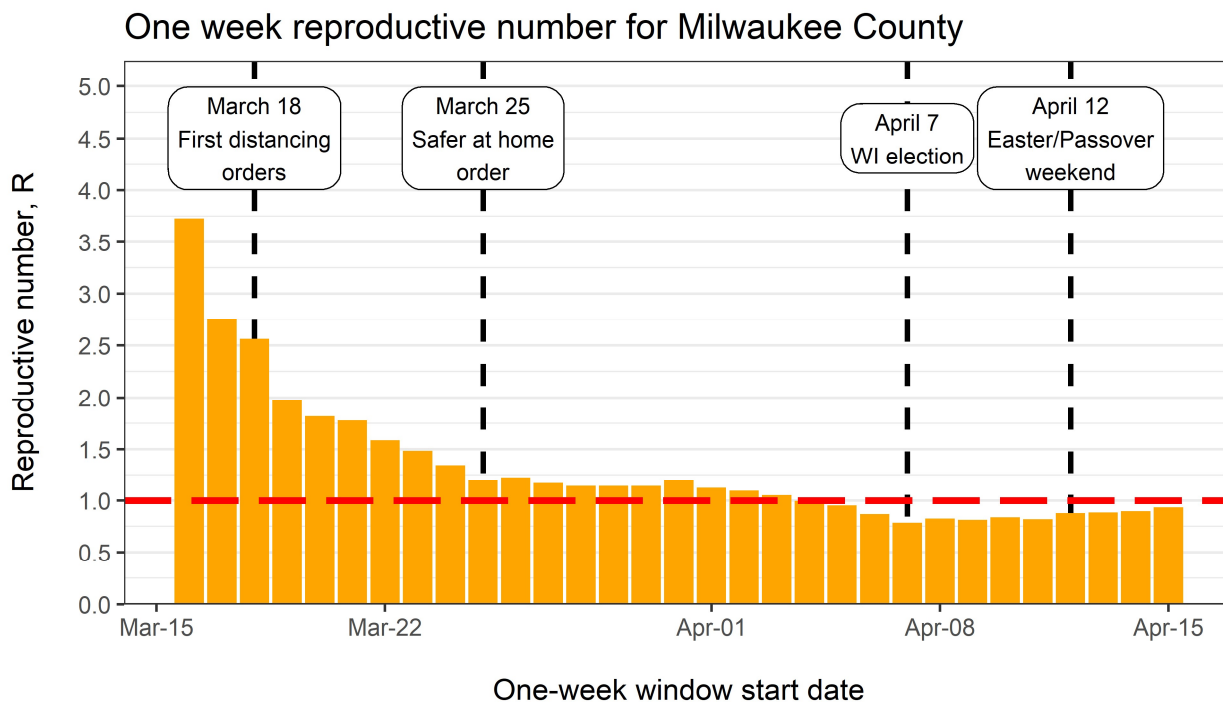


## The COVID-19 Growth Rate

The time it takes for the number of cases to double is called the doubling time. The first figure below shows doubling times for Milwaukee County, the M7 (7-county) metropolitan area, and the state of Wisconsin. Dotted lines indicate doubling times of 1, 2, 3 and 4 days. The current doubling time in Milwaukee County is 13.30 days.



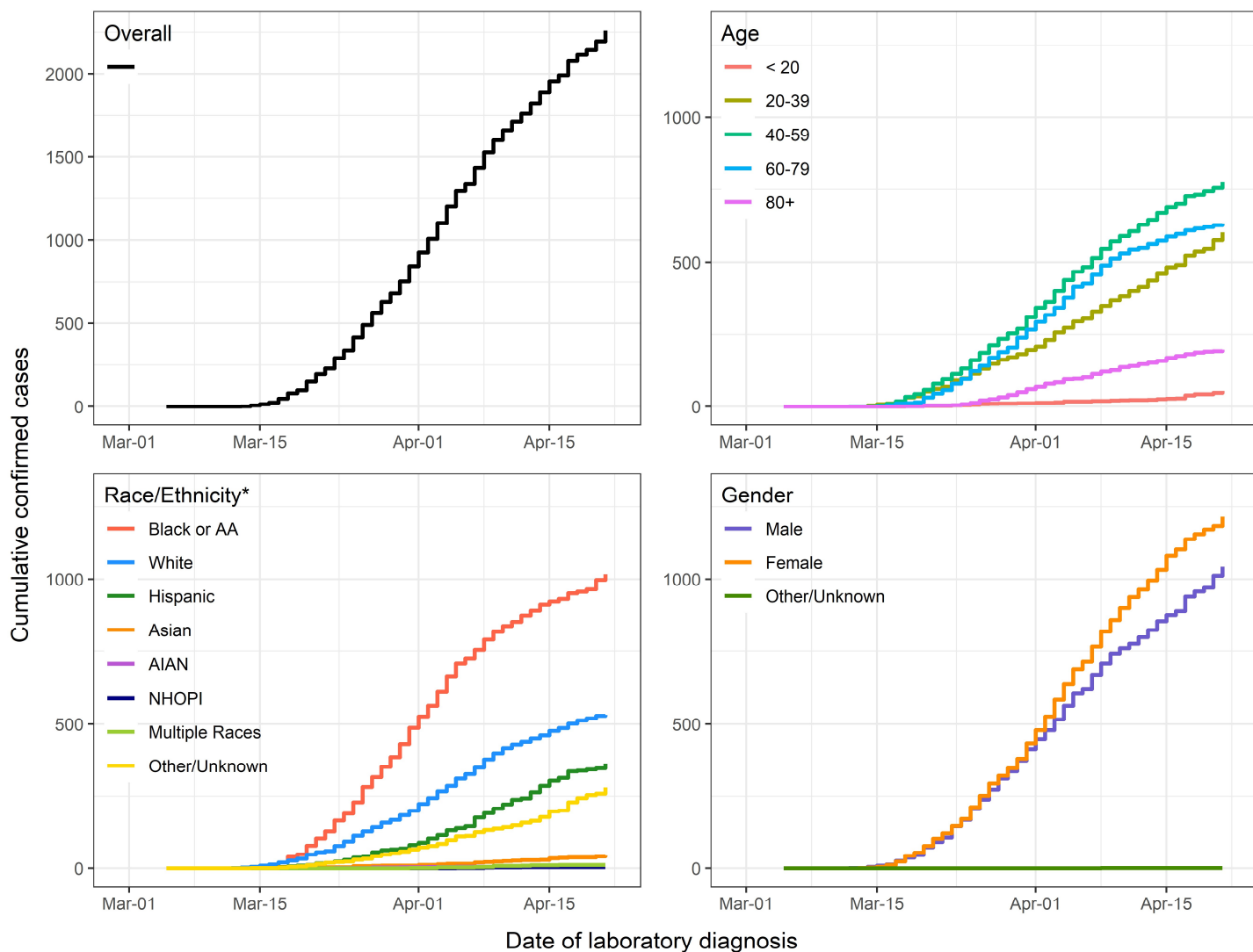
Another way of examining the growth rate of the infection is to examine the reproductive number ( $R$ ) of the virus. This number captures the number of new cases that are the result of an existing case. For example, an  $R$  of 2 would indicate that each infected person infects 2 new people. The figure below shows the change in  $R$  over time along with key dates related to physical distancing affecting Milwaukee County residents. The  $R$  for each date is calculated to represent the  $R$  for a 7 day period with the start day of that 7 day period represented on the graph.



## Demographic Patterns – Age, Sex, Race and Ethnicity

### Confirmed cases

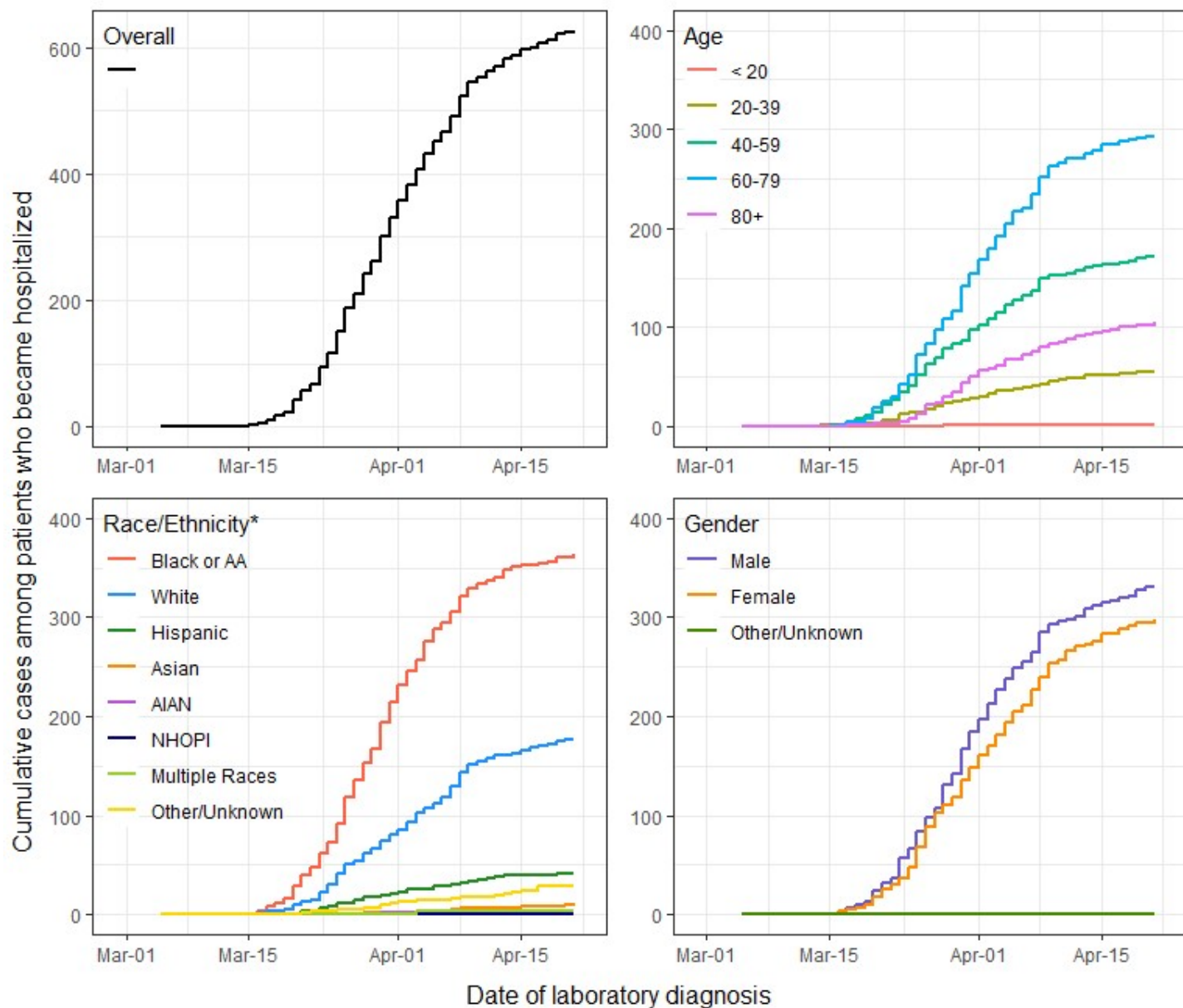
COVID-19 cases vary by demographic characteristics. Most diagnosed cases fall within the ages of 20-79. Of all confirmed cases, 46% are male and 54% are female. The largest number of cases have been diagnosed among the Black or African American (AA) population. These plots include confirmed positive cases with an available laboratory confirmation date.



\* Race and ethnicity were combined into one variable where the Hispanic category includes Hispanics of any race. AIAN stands for American Indian or Alaska Native and NHOPI stands for Native Hawaiian or Other Pacific Islander.

## Hospitalizations

A total of 628 individuals have been hospitalized due to COVID-19. Most hospitalized cases are between 40 and 79 years of age. As with total cases, the highest number of hospitalizations is among the Black/AA community. By gender, males are hospitalized more often than females, with males comprising 53% of the total hospitalized cases; this is in contrast to total cases, as females are more often diagnosed. Note: A previous coding error affecting hospitalization data was identified and corrected on June 8th; we regret this error. This report has been updated to correct this error.

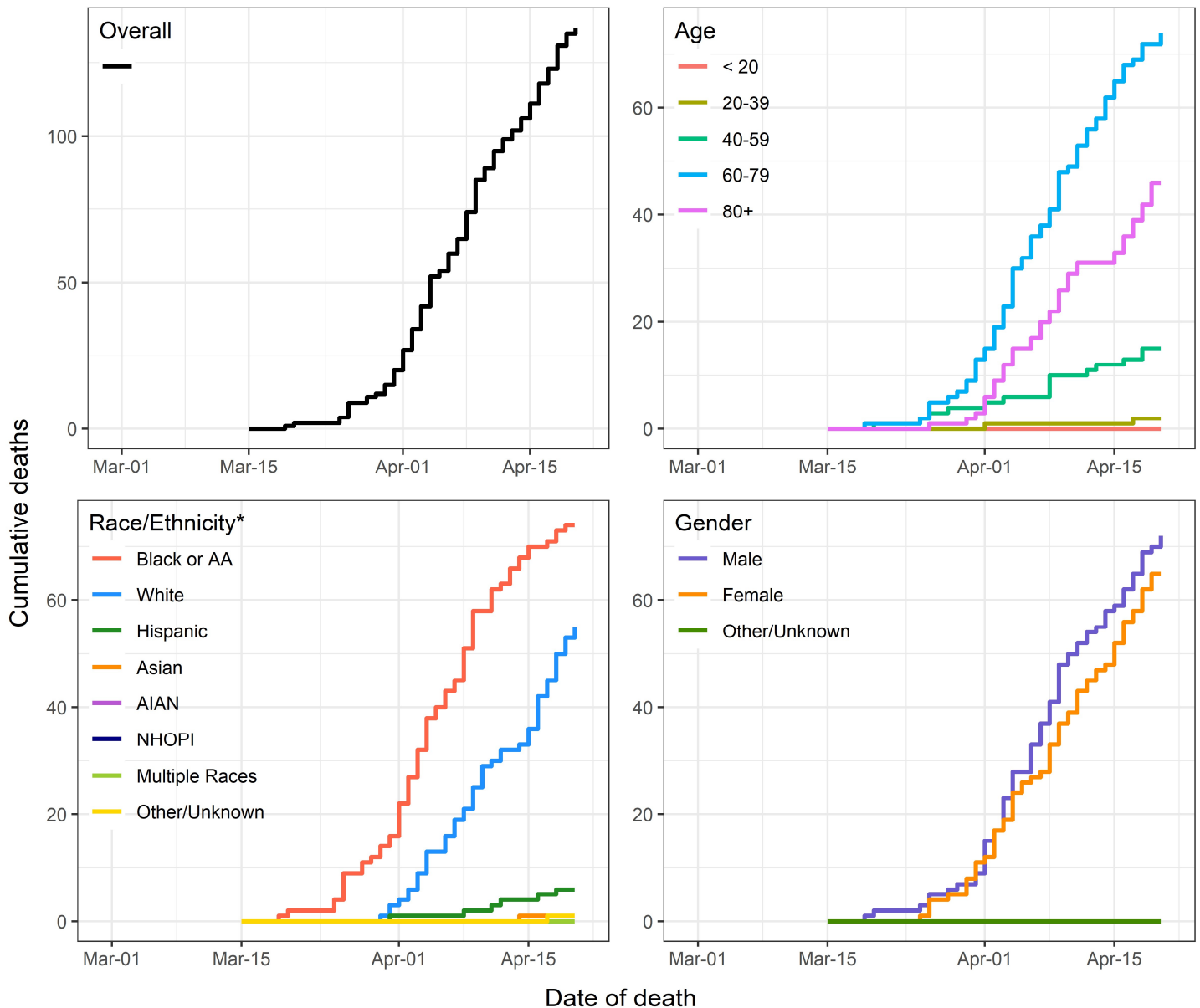


\* Race and ethnicity were combined into one variable where the Hispanic category includes Hispanics of any race. AIAN stands for American Indian or Alaska Native and NHOPI stands for Native Hawaiian or Other Pacific Islander.



## Deaths

There are now a total of 137 confirmed deaths in Milwaukee County, representing a case fatality rate of 6.06%. We observed 31 new deaths over the past week in the county. The current doubling rate in the county (the number of days it takes for the number of deaths to double) is 19.43 days. Mortality patterns differ by demographic characteristics. The largest number of deaths are recorded among those age 60 or older. Similar to hospitalizations, the largest number of deaths are recorded for the Black/AA community and for males.

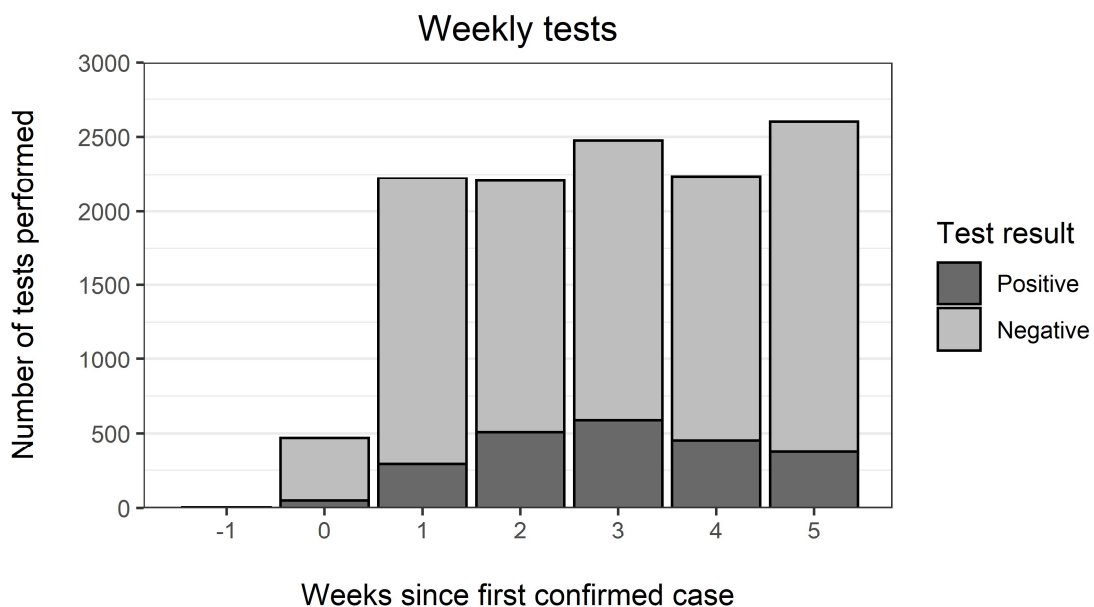
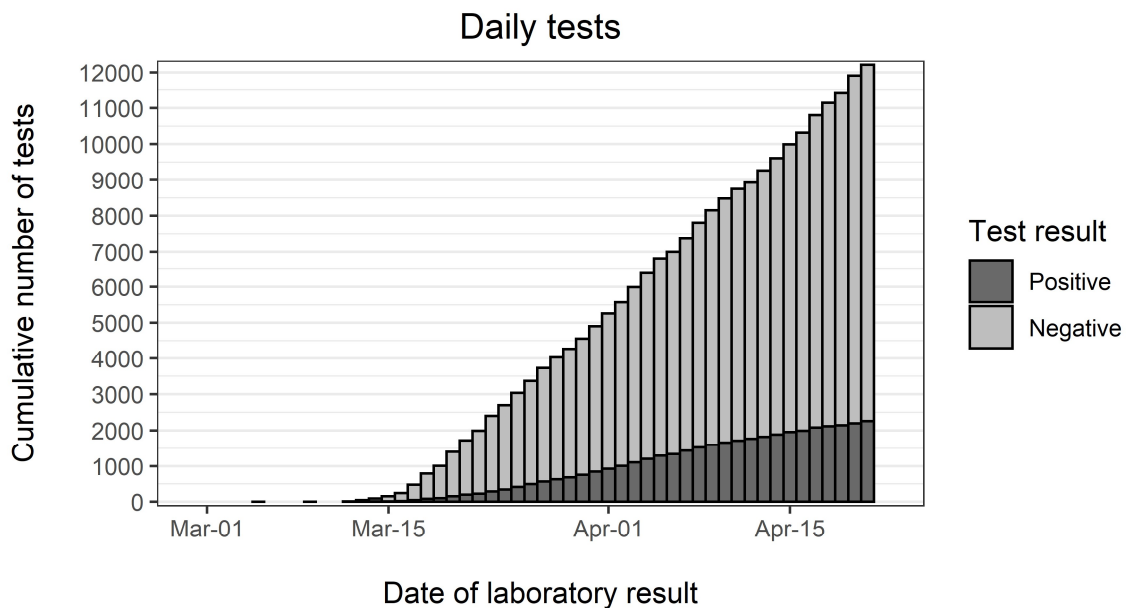


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## Testing Coverage

Testing for the novel coronavirus is an important public health response to limiting the spread of the infection. Testing capacity has been limited in Milwaukee County and across the country. Since the first case of COVID-19 was diagnosed in Milwaukee County on March 12, 2020, a total of 12212 COVID-19 tests have been returned with a laboratory result, with 9952 returned negative and 2260 confirmed cases.

As shown in the first figure below, the total number of tests and the total number of positive and negative tests has gradually accumulated over time, with many more negative than positive tests. As shown in the second figure, the total number of tests performed per week has remained fairly constant, with an increase among total tests completed and a slight decrease in positive tests last week, in comparison to the previous week.

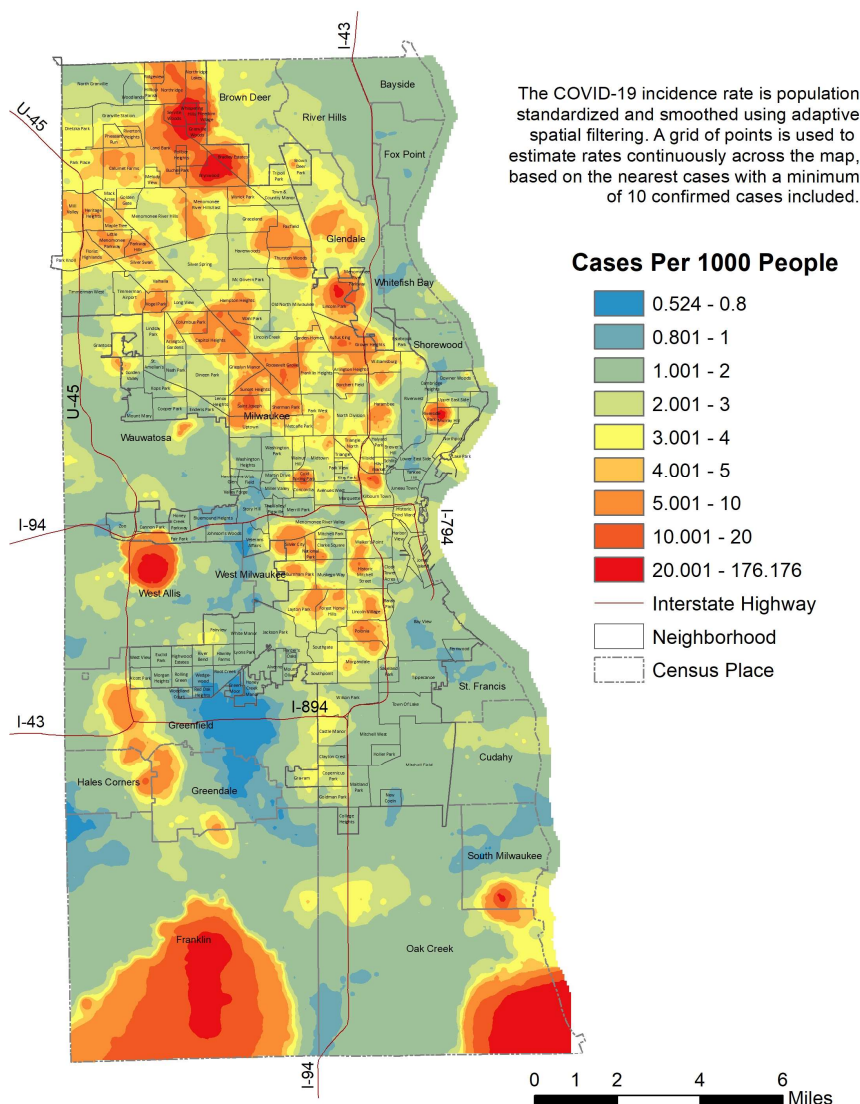


## Spatial Patterns of Cases and Testing

COVID-19 spread is spatially patterned. Map 1 below illustrates the cumulative burden (all confirmed cases) of COVID-19 in Milwaukee County. Map 2 shows only the cases confirmed over the last week. Map 3 shows the testing rate across the population. Map 4 depicts the proportion of total tests completed that were confirmed positive. Map 5 shows cumulative COVID-19 related hospitalizations in Milwaukee County. All are crude rate maps created using residential addresses and census block level population data from the US Census. The maps are smoothed to protect confidentiality and ensure that rates are stable while still providing geographic detail. High rates are depicted in red with lower rates depicted in blue. Of note, some of the higher rates observed can be attributed to infections that have spread within group quarters, such as a nursing home, prison, or long-term care facility.

### Map 1: All confirmed cases of COVID-19

#### Crude Rate of COVID-19 Milwaukee County March 12 - April 22, 2020



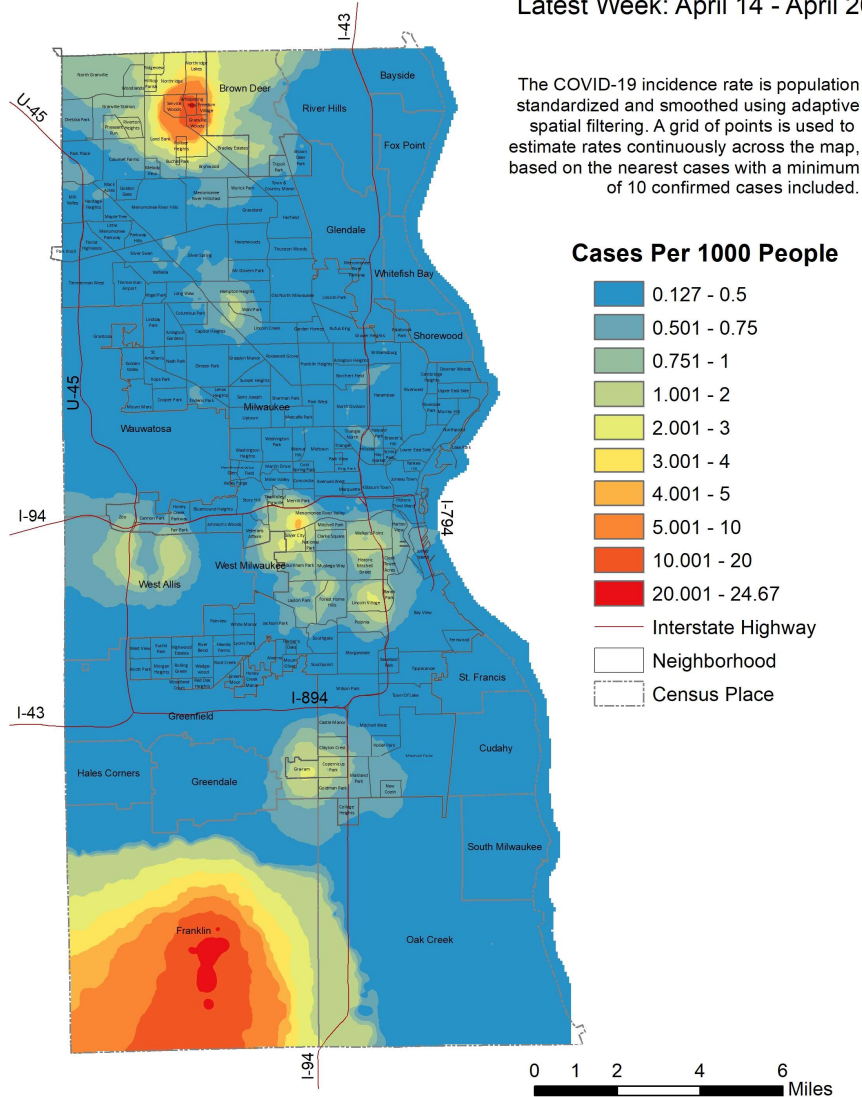
Date Range: 03/12/2020 - 04/22/2020

Data Source: Wisconsin Electronic Disease Surveillance System (WEDSS)  
2010 Decennial Census

## Map 2: Confirmed cases of COVID-19 within the last week

### Crude Rate of COVID-19 Milwaukee County 2020

Latest Week: April 14 - April 20

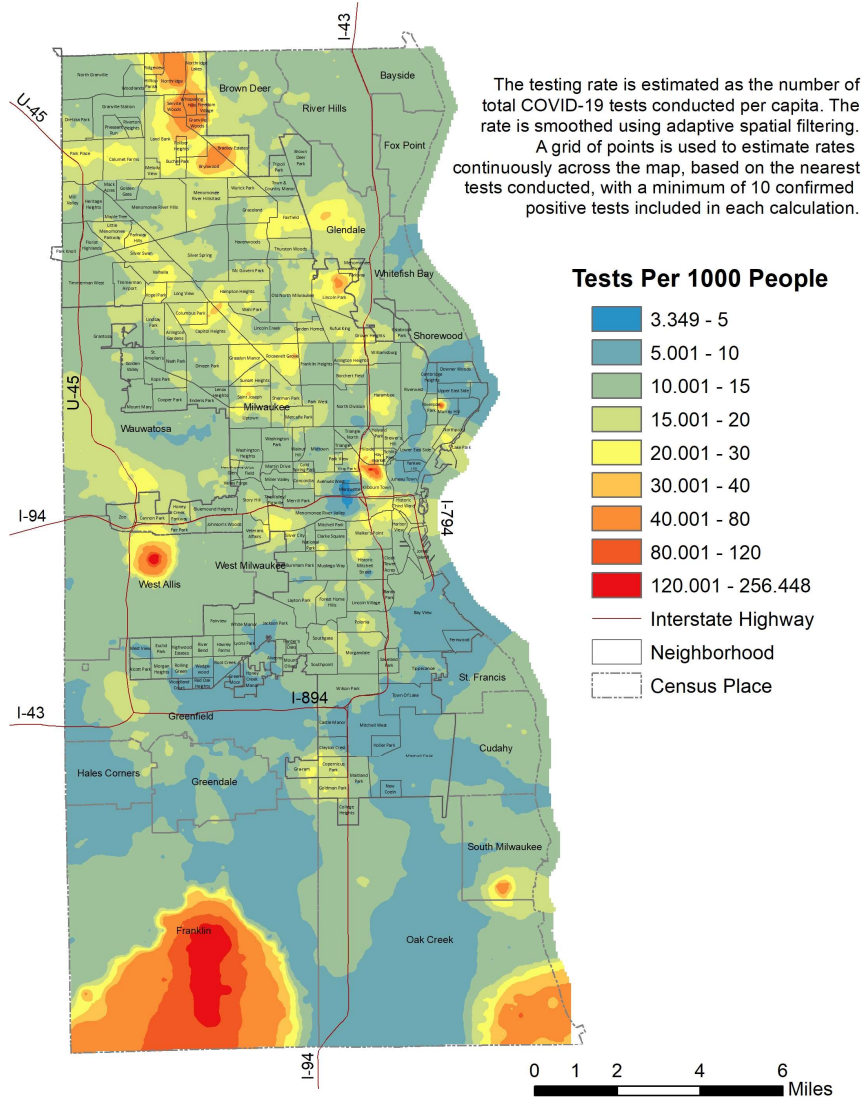


Date Range: 04/14/2020 - 04/20/2020

Data Source: Wisconsin Electronic Disease Surveillance System (WEDSS)  
2010 Decennial Census

## Map 3: Testing rate

### COVID-19 Testing Rate Milwaukee County March 12 - April 22, 2020



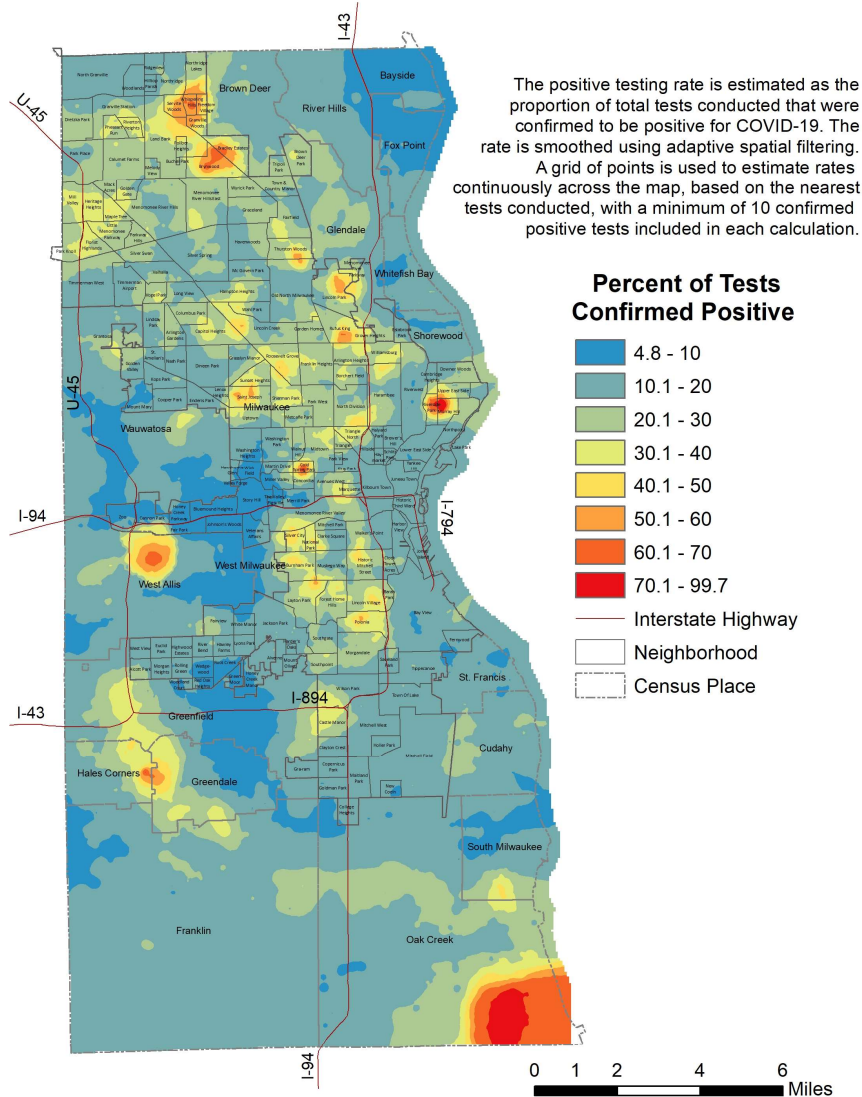
Date Range: 03/12/2020 - 04/22/2020

Data Source: Wisconsin Electronic Disease Surveillance System (WEDSS)  
 2010 Decennial Census



## Map 4: Proportion of total tests completed that were confirmed positive

### COVID-19 Positive Testing Rate Milwaukee County March 12 - April 22, 2020

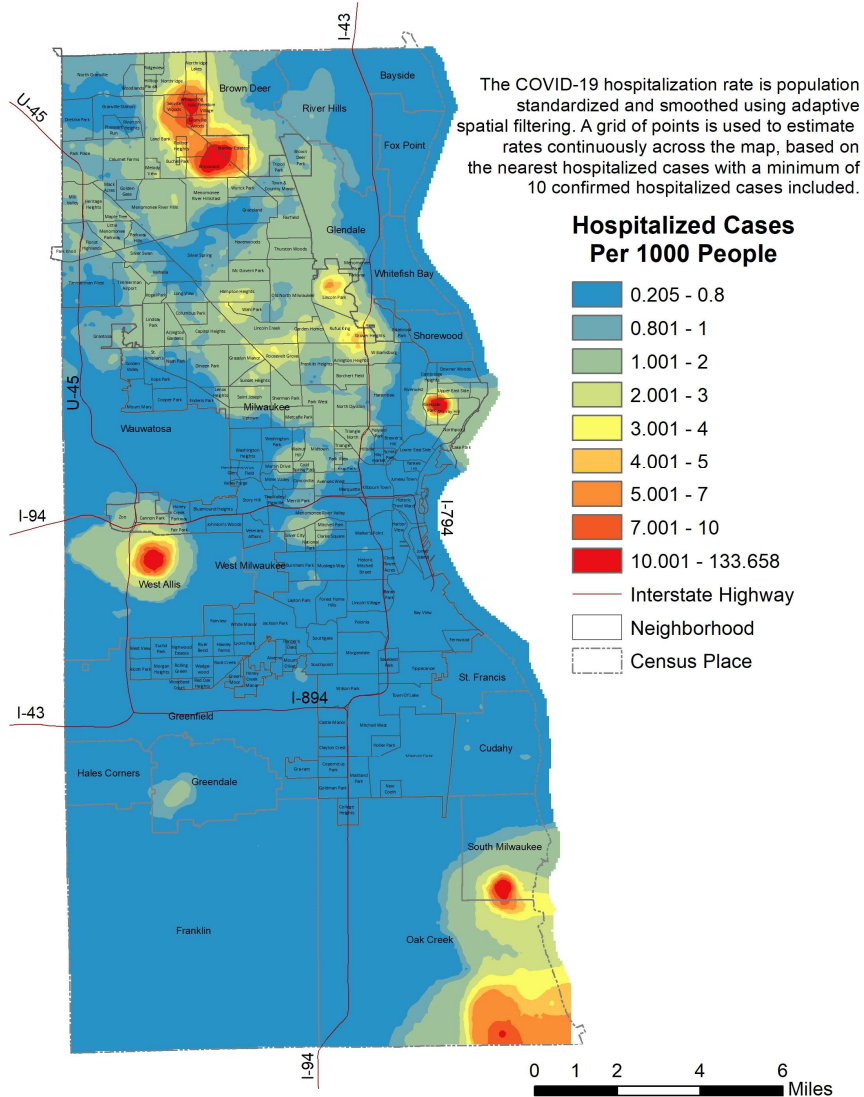


Date Range: 03/12/2020 - 04/22/2020

Data Source: Wisconsin Electronic Disease Surveillance System (WEDSS)  
 2010 Decennial Census

## Map 5: COVID-19 related hospitalizations

### Crude Hospitalization Rate of COVID-19 Milwaukee County March 12 - April 22, 2020



Date Range: 03/12/2020 - 04/22/2020

Data Source: Wisconsin Electronic Disease Surveillance System (WEDSS)  
 2010 Decennial Census



## Data Sources & Acknowledgments

This report was created by faculty and staff in the Medical College of Wisconsin (MCW) Institute for Health and Equity (IHE) in partnership with representatives from local health departments and faculty from the University of Wisconsin-Milwaukee Zilber School of Public Health. Data sources include the Wisconsin Electronic Disease Surveillance System (WEDSS), the US Census Bureau, the Milwaukee County Medical Examiner's office, the Emergency Medicine Resource, and publicly available data obtained from local health and emergency response agencies. Data from the Wisconsin Electronic Data Surveillance System (WEDSS) summarized for the week includes data from April 29, 2020 through May 05, 2020. This work was funded by the Advancing a Healthier Wisconsin Endowment at the Medical College of Wisconsin.

## Contact Information

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